



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10**

1200 Sixth Avenue, Suite 900
Seattle, WA 98101-3140

OFFICE OF
ECOSYSTEMS, TRIBAL AND
PUBLIC AFFAIRS

December 13, 2010

Anjela Freudenstein
AWV Environmental Manager
AWV Project Office (Wells Fargo Building)
999 Third Ave, Suite 2424
Seattle, Washington 98104 - 4019

Re: U.S. Environmental Protection Agency (EPA) comments on the Alaskan Way Viaduct Replacement Project (AWVRP) 2010 Supplemental Draft Environmental Impact Statement (2010 SDEIS) and Section 4(f) Evaluation.
EPA Project Number: 01-050-FHW.

Dear Ms. Freudenstein:

The EPA has reviewed the AWVRP 2010 SDEIS and we are submitting comments in accordance with our responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act. Under our policies and procedures, we evaluate the environmental impact of the proposed action and the adequacy of the impact statement. We have assigned an EC-2 rating to the 2010 SDEIS. A copy of the EPA rating system is enclosed.

EPA has coordinated with the lead agencies on this project since at least February 2002. Between February 2002 and today, EPA has submitted nine letters and attended numerous agency meetings. In our June 2, 2004 comments on the Draft EIS we commended the lead agencies because, "all of your proposed alternatives incorporate multi-modal transportation features such as enhancements to existing facilities for non-motorized transportation, and expanded efforts to improve transit and reduce single-occupancy vehicle trips." In our September 22, 2006 comments on the Supplemental Draft EIS we recommended that an "air pollutant emission control plan" be integrated into the Final EIS. In our September 18, 2008 and July 10, 2009 scoping letters for the 2010 SDEIS we recommended a full suite of diesel mitigation measures and maximizing efforts to improve the Combined Sewer System. On November 3, 2009 we commented on your draft revised purpose and need statement and recommended the addition of an "environmental need" to the project. Overall, the 2010 SDEIS is responsive to the majority of our concerns and we appreciate the lead agencies' sustained and effective interagency coordination efforts.

There are numerous notable accomplishments in the 2010 SDEIS. For example, we commend you for your clear summaries of water quality conditions in the Duwamish River, Elliott Bay, and Lake Union as well as your description of stormwater management on the viaduct and Alaskan Way (2010 SDEIS, Chapter 4, Questions 24 and 25). We also appreciate your disclosure of worst-case CO concentrations at receptor locations and your selection of a

Tier 3 approach for Mobile Source Air Toxics (MSATs) from FHWA's September 30, 2009 *Interim Guidance Update on Air Toxic Analysis in NEPA Documents*. EPA also would like to note your responsiveness to our concern that the appendices were referenced as whole documents in the main text of the 2006 SDEIS – the inclusion of specific page numbers and sections in the Appendices for related information in the main text of the 2010 SDEIS is part of your larger achievement to have created a generally readable, organized and informative NEPA document for a complex project.

Our enclosed detailed comments describe environmental impacts which EPA believes should be avoided to fully protect the environment as well as concerns about insufficient information. Corrective measures may require changes to the preferred alternative or the application of mitigation measures that can reduce impacts. Our primary environmental concerns relate to the potential for increased transit travel times and environmental justice impacts from tolling and construction. We also believe the 2010 SDEIS does not contain sufficient information in the following areas.

1. Information about how "The purpose and need of the project were updated to reflect current state and local priorities as expressed through the Partnership Process." (2010 SDEIS, p. 53).
2. Information about the alternatives development process, especially how design concepts were evaluated.
3. Comparative information among alternatives on impacts to air quality and water resources.
4. Information on optimization measures which would be required to avoid unacceptable impacts to transit and environmental justice populations from tolling.

To address our environmental and informational concerns, we provide a series of related recommendations in the enclosed comments.

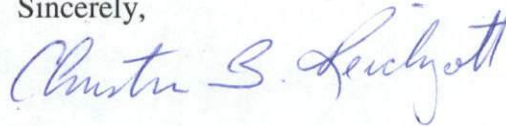
- With regard to points 1 and 2, we recommend additional information on the relationship between Partnership Process guiding principles and evaluation measures and, respectively, the elements of the 2010 SDEIS's purpose and need statement and screening criteria.
- With regard to comparative information on air quality and water resources impacts among alternatives we recommend the FEIS determine and disclose which of the alternatives has the lowest air quality impacts and best improves water quality.
- With regard to the optimization measures which would be required to avoid unacceptable impacts to transit and environmental justice populations, we recommend the lead agencies develop and disclose measures which would effectively reduce predicted transit travel times and avoid potential adverse environmental justice impacts from tolling.
- We also recommend and cite examples of transportation contract language to mitigate air quality and noise impacts from construction as well as encourage the lead agencies to commit to various specific proposed construction mitigation measures found throughout the 2010 SDEIS and Appendices.

Altogether we believe the Alaskan Way Viaduct Replacement Project is a unique opportunity to address regional goals to achieve a sustainable transportation system. Such a system can best

be achieved by making clear decisions to reduce short, medium and long-term impacts from transportation to air quality, water resources and climate change.

Thank you for this opportunity to comment and if you have any questions or concerns please contact Erik Peterson of my staff at (206) 553-6382 or by electronic mail at peterson.erik@epa.gov. You may contact me at (206) 553-1601.

Sincerely,



Christine B. Reichgott, Manager
Environmental Review and Sediment Management Unit

Enclosure:

U.S. Environmental Protection Agency Detailed Comments on the Alaskan Way Viaduct
Replacement Project 2010 Supplemental Draft Environmental Impact Statement and Section 4(f)
Evaluation
EPA Rating System for Draft Environmental Impact Statements

U.S. ENVIRONMENTAL PROTECTION AGENCY DETAILED COMMENTS ON THE ALASKAN WAY VIADUCT REPLACEMENT PROJECT 2010 SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT AND SECTION 4(F) EVALUATION

Purpose and Need

We do not believe the 2010 SDEIS sufficiently discloses how, “The purpose and need of the project were updated to reflect current state and local priorities as expressed through the Partnership Process.” (2010 SDEIS, p. 53). While certain elements of the purpose and need were added to, “...more closely align it with the guiding principles established for the Partnership Process.” (e.g., “Protect the integrity and viability of adjacent activities on the central waterfront and in downtown Seattle”) other guiding principles were not addressed within the purpose and need (e.g., “Create solutions that are fiscally responsible” and “Improve the health of the environment”).

We are especially concerned that the 2010 SDEIS does not describe why the Partnership Process Guiding Principle “Improve the health of the environment” is not represented in the 2010 SDEIS purpose and need. Identification of the specific guiding principles represented in the project’s purpose and need is important because the potential action alternatives (“design concepts”) were evaluated and screened by the lead agencies using criteria developed based on the project’s purpose and need statement.

Recommendation:

- We recommend that the FEIS discuss the reasoning behind not representing the Partnership Process’s guiding principles “Create solutions that are fiscally responsible” and “Improve the health of the environment” in the 2010 SDEIS’s purpose and need.

Alternatives Development

We do not believe the 2010 SDEIS sufficiently discloses the relationship between the hybrid scenarios recommended by the Partnership Process’s Independent Project Management Team (I-5, Surface and Transit, Elevated Bypass, and Bored Tunnel) and the range of alternatives analyzed in the 2010 SDEIS (2006 SDEIS Elevated Structure, 2006 SDEIS Tunnel (Cut-and Cover Tunnel), and Bored Tunnel Hybrid). While the 2010 SDEIS sufficiently describes why the Partnership Process Bored Tunnel Hybrid is included as an action alternative (e.g., the 2009 Recommendation from the Governor, County Executive, and Mayor), we do not believe the 2010 SDEIS sufficiently describes why the Partnership Process I-5, Surface and Transit Hybrid, is not included as an action alternative.

Our specific concern centers on the 2010 SDEIS’s description of apparently higher screening weights for mobility and north-south capacity relative to construction disruption and connections between downtown and the waterfront. We are especially interested in how 2010 SDEIS screening criteria were weighted because the Partnership Process evaluation measures (Appendix S, Exhibit 3-3) appear to be conceptually similar, yet, they were used to eliminate the Cut-and-Cover hybrid scenario and included the I-5, Surface and Transit hybrid scenario. The

2010 SDEIS design concept reevaluation process, on the other hand, eliminated the I-5, Surface and Transit hybrid scenario and included the 2006 SDEIS Tunnel.

Recommendation:

- We recommend that the FEIS include additional information on how the 2010 SDEIS's screening criteria differed from the Partnership Process's "Evaluation Measures" (Appendix S, Exhibit 3-3). Please discuss whether or not and how differences between the 2010 SDEIS screening criteria and the Partnership Processes evaluation measures influenced the development of alternatives.
- We recommend that the environmentally preferred alternative be identified from among all of the alternatives (2004 DEIS, 2006 SDEIS and 2010 SDEIS) considered throughout this NEPA process.

Air Quality

We are concerned that the 2010 SDEIS does not present air quality impacts in a sufficiently comparative form. More information is needed to understand the difference in potential air quality impacts among alternatives to a degree where the analysis could provide a basis for choice (40 CFR Part 1502.14). We also believe more air quality information is needed in order to support the eventual identification of an environmentally preferred alternative.

The 2010 SDEIS's answer to question 18 "How would effects to air quality compare?", for example, focuses on similarities and does not sufficiently compare differences among the alternatives. We agree that regardless of the alternative chosen, emissions (NAAQS and MSATs) will be lower than present levels in the design year as a result of EPA's national control programs. Providing an environmental basis for choice related to air quality or supporting the systematic identification of the environmentally preferred alternative, however, will require a greater focus on the differences among alternatives than that which is presented in the 2010 SDEIS.

Readers interested in the air quality differences among alternatives have to review both the 2010 SDEIS's Appendix M as well as the 2006 SDEIS's Appendix Q. While such an effort may be considered reasonable given the complexity of the Project, we believe the information presented is insufficient because the Appendices cannot be directly compared. First, the intersections of interest (receptor locations) are different for the 2006 analysis and for the 2010 analysis (see 2010 SDEIS Appendix M Exhibits 5-1 and 5-4 as well as 2006 SDEIS Appendix Q Exhibits 5-1 and 5-2). Second, while the 2010 SDEIS's Appendix M notably discloses quantitative MSAT emissions for the Bored Tunnel Alternative (Exhibit 5-4) there is no comparable MSAT emissions disclosure in the 2006 SDEIS's Appendix Q for the Cut-and-Cover Alternative and the Elevated Structure Alternative.

Recommendations:

- Include in the FEIS more sufficient information comparing the differences among alternatives with regard to air quality impacts. Please analyze existing and new information to determine and disclose which of the action alternatives would have the lowest air quality impacts.

- We recommend the lead agencies consider the potential benefits for understanding and comparing the Project's air quality impacts from using EPA's new Motor Vehicle Emission Simulator – MOVES 2010a.
- With regard to air quality construction mitigation measures we recommend appropriate resources for the Project from the EPA's Clean Diesel website - <http://www.epa.gov/cleandiesel/>. We believe example contract language may be especially useful - <http://www.epa.gov/otaq/diesel/construction/contract-lang.htm>

Water Resources

We are concerned that the 2010 SDEIS does not present impacts to water resources in a sufficiently comparative form. We agree that all of the alternatives would likely contribute to and facilitate opportunities for water quality improvements. We are unsure, however, which of the alternatives would be best for water quality. Determining which of the alternatives is best for water quality is a necessary part of providing a basis for choice based on an understanding of environmental consequences as well as contributing to the systematic identification of an environmentally preferred alternative.

Recommendations:

- Include in the FEIS sufficient information to compare the differences among alternatives with regard to water resources impacts. Please analyze existing and new information to determine and disclose which of the action alternatives (or sub-alternatives) would have the fewest impacts to water resources. Consider, as appropriate: (i) the relative consistency with VISION 2040 MPP-En-13 "Maintain natural hydrological functions within the region's ecosystems and watersheds and, where feasible, restore them to a more natural state."¹, and, (ii) the relative degree to which Green Stormwater Infrastructure practices could be incorporated among the alternatives.

Multi-modal Enhancements

We continue to believe, as noted in our July 10, 2009 scoping comments, that integrating enhancements for public transportation, bicycles and pedestrians – as well as providing through capacity for vehicles – is consistent with quality urban design, increases clean and efficient transportation options, and promotes healthy living. We are pleased that the preferred alternative would, for example, reduce transit travel times for PM outbound travelers from downtown to West Seattle and from downtown to Woodland Park. We are concerned, however, about modeled increases in transit travel times to and from downtown, and we agree that adverse impacts to transit from tolling would not be acceptable (2010 SDEIS, p. 215).

Recommendations:

- We recommend that - for any modeled result showing increased transit travel times (as compared to existing conditions) - the FEIS discuss and consider for adoption in the ROD, potential adaptive design and management features which would mitigate this adverse impact.

¹ <http://www.psrc.org/assets/1741/Environment.pdf>

- We recommend that the FEIS include additional information on the likelihood that reasonable optimization measures for tolling would adequately mitigate adverse impacts on transit.

Environmental Justice

We commend the lead agencies for their substantial efforts to take environmental justice concerns into account. We also commend the lead agencies for a generally clear discussion of potential environmental justice impacts – your inclusion and summary of relevant research in 2010 SDEIS Chapter 9, is valuable. We agree that disproportionately high and adverse impacts on environmental justice populations from the Bored Tunnel Alternative could be avoided or reduced by careful planning and design (2010 SDEIS, Appendix H, p. 137). We also note and agree with the 2010 SDEIS's Environmental Justice Determination's concern for potential adverse effects from construction.

In addition to potential adverse impacts to low income and minority populations from construction, we would add potential adverse effects from tolling as a key concern. We are especially concerned about the potential impacts to low income and minority populations from a facility that not only charges a toll (representing a disproportionately larger share of relatively lower income earners' overall income), but also fails to improve trip reliability and higher speeds (2010 SDEIS, p. 219-220).

Recommendations:

- With regard to potential adverse environmental justice impacts from construction we recommend the lead agencies' strongly consider integrating into all action alternatives and committing in the ROD to the full suite of mitigation measures proposed for (i) "Neighborhoods and Community Services" and "Environmental Justice" on page 158 of the 2010 SDEIS and (ii) "Social and Employment Services" and "Environmental Justice" in section 6.2 of Appendix H.
- With regard to the need for reasonable optimization measures to ensure improvements in trip reliability and higher speeds, we recommend that the FEIS include additional information on the likelihood that reasonable optimization measures for tolling would successfully mitigate adverse Environmental Justice impacts.

**U.S. Environmental Protection Agency Rating System for
Draft Environmental Impact Statements
Definitions and Follow-Up Action***

Environmental Impact of the Action

LO – Lack of Objections

The U.S. Environmental Protection Agency (EPA) review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC – Environmental Concerns

EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce these impacts.

EO – Environmental Objections

EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no-action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU – Environmentally Unsatisfactory

EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

Adequacy of the Impact Statement

Category 1 – Adequate

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis of data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2 – Insufficient Information

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses or discussion should be included in the final EIS.

Category 3 – Inadequate

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the National Environmental Policy Act and or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

* From EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment. February, 1987.